Churchtown Flood Alleviation Scheme

Draft Final Report
Construction of the Kirkland Bund

For

Community Foundation for Lancashire

United Utilities

Environment Agency

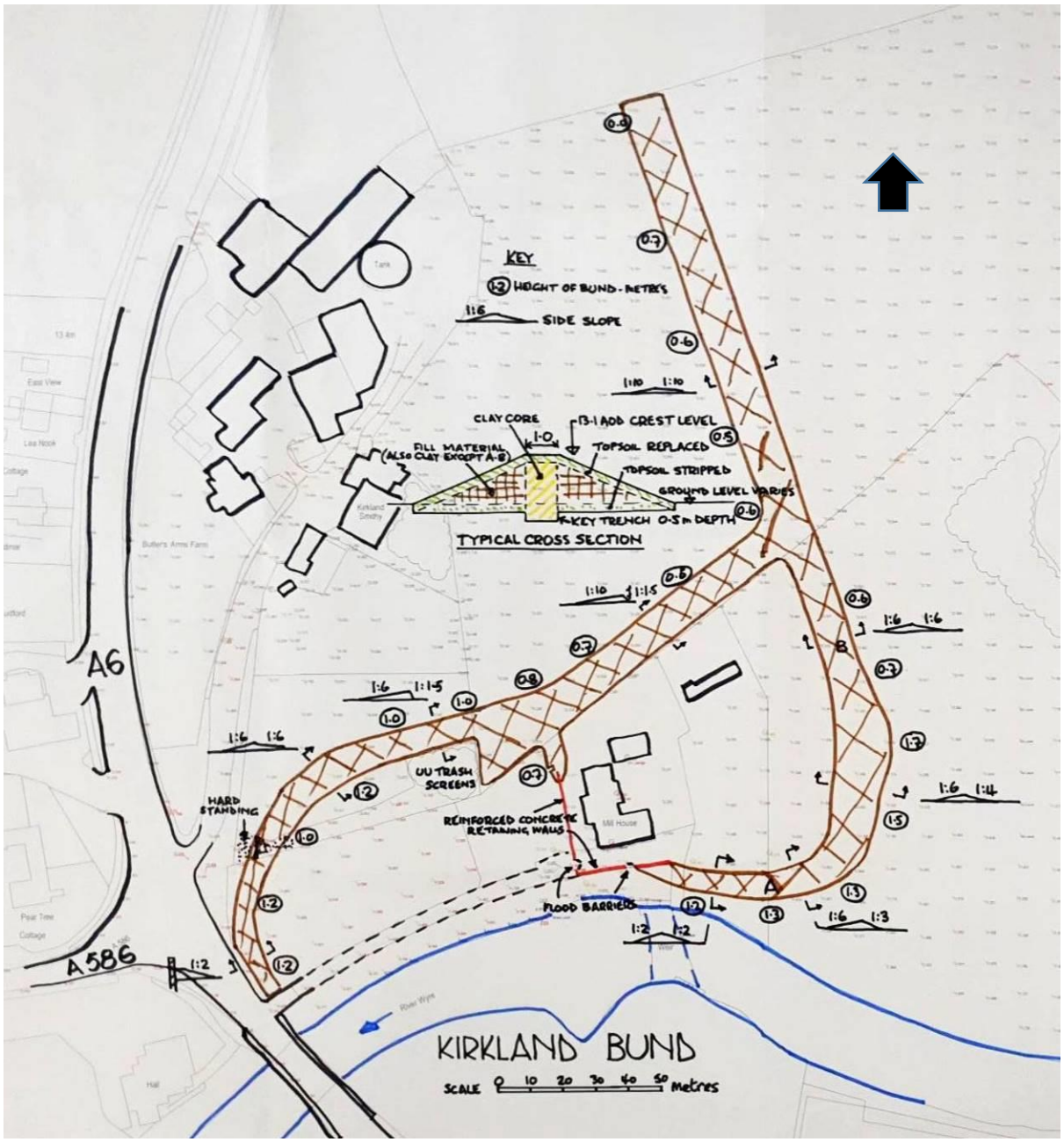
Flood Risk Management Authorities

Concerned Organisations

Flooded Communities

Churchtown Flood Action Group August 2019

As-built Drawing



Full size copies of this drawing at 1:500 scale is being provided to

Environment Agency and Wyre Borough Council

Contents

Abbreviations

AOD	Above Ordnance Datum Level
CFfL	Community Foundation for Lancashire
EA	Environment Agency
GiA	Grant-in-Aid
KPC	Kirkland Parish Council (for Churchtown)
UU	United Utilities
WBC	Wyre Borough Council

Summary

Following the flooding of Churchtown on 5 December 2015 and again 22 August 2016, the Churchtown Flood Action Group (CFLAG) conceived a flood protection scheme, also known as the Kirkland Bund, which drastically reduces the risk of such devastation ever happening again.

The cause of devastation was the choking of the River Wyre at Kirkland Bridge, resulting in the back-up of water upstream that eventual rose high enough to cross the main A6 highway. Once this happened, flood water then continued for 1 km to the far end of Churchtown. Storm Desmond flooded 58 properties including a farm, business premises, the village hall and school.

After Wyre Council provided a topographic survey showing all features and ground levels around Kirkland Bridge, it was possible to establish the viability of a new flood protection scheme. Normally it would be expected that the appropriate authority would implement this but we were informed that such a scheme would not satisfy the benefit-cost threshold needed for EA implementation. So the CFLAG developed the scheme in more detail, which simply comprised an earthen embankment starting from Kirkland Bridge and running back from the river bank to a point in the fields beyond Butlers Arms Farm where the natural ground level was higher than the A6 main road. Flood water could still back up behind the new bund but would not now cross the A6.

To achieve this, the bund had to cross three properties. Mill House would be on the "wrong" side of the bund and so a loop had to be designed around it to keep it safe. Because of its access road, river bank access and its closeness to the river, retaining walls and two flood barriers were needed in addition to the earthen bund to complete the flood protection for all parties.

Costs were estimated at £113,000 and the idea was launched for the CFLAG to raise this from charities. All moneys would be channelled through the Parish Council and a Contracts Manager appointed to be responsible for implementing the works. The CFLAG would retain oversight of the programme. The key principle was that work could only be authorised by the CFLAG when sufficient CFLAG funds were held in the Parish Council bank account. This meant that the contractual arrangements had to have flexibility on timeframe.

Despite funds being forthcoming from the Community Foundation for Lancashire and United Utilities in Feb 2018 totalling £30,000, a start on earthworks could not be made until the CFLAG had obtained all the permissions and permits and had the assurance that the remaining funds would be forthcoming. Working on these challenges in parallel, pulling back costs to less than £100,000 to qualify for EA Grant-in-Aid funding, the Bespoke Permit was eventually granted on 20 Aug 2018. Work started on that day and took 6 weeks to complete the earthen bund that then protected the whole of Churchtown. The balance of funding came available in November 2018 and only at this point could orders be authorised for the remaining wall units and flood barriers. The project was substantially completed on 25 Jan 2019.

Ongoing inspection and maintenance of the Kirkland Bund is now the responsibility of the three land owners for the parts of the structure within their properties.

Completion of the Bund was celebrated on 22 Aug 2019, being the third anniversary of what should be the last major flooding of Churchtown. The Lord Lieutenant of Lancashire, Lord Shuttleworth, cut the ribbon at the gate to the bund and then viewed the rest of the 630 m long structure and its two flood barriers. He noted that this project has been the first example in the UK where a community has conceived and built its own major flood defence. At last, residents of Churchtown can start to feel less anxious whenever heavy rain is forecast.

1. Background

After 35 years without major flooding, Churchtown had confidence in the flood defence system built following the disastrous flooding of 1980; the previous major flooding was in 1927. Storm Desmond was a different story because of all the other the contributing factors -

- Heavy rainfall over the previous 60 days saturating the catchment
- Record level rainfall in the 2 days prior to the 5 Dec 2015 (Storm Desmond)
- High tide preventing the evacuation of the peak flow
- Problems with the raising of the flood barrier at Garstang
- Exposure of weaknesses and low-spots in the flood defence system of the 1980's

The scene that unfolded on the night of Saturday 5 December 2015 was -

- Surface water accumulating in roads and gardens in the afternoon
- Kirkland Bridge reached its max discharge rate and flood water broke out around 6 p.m.
- Flood water crossed the A6 main highway around 8 p.m.
- By 10 pm the whole of Churchtown was affected by the flood water from Kirkland Bridge
- Peak flood level around 2 a.m. on 6 Dec, 58 houses flooded above floor level, power off.

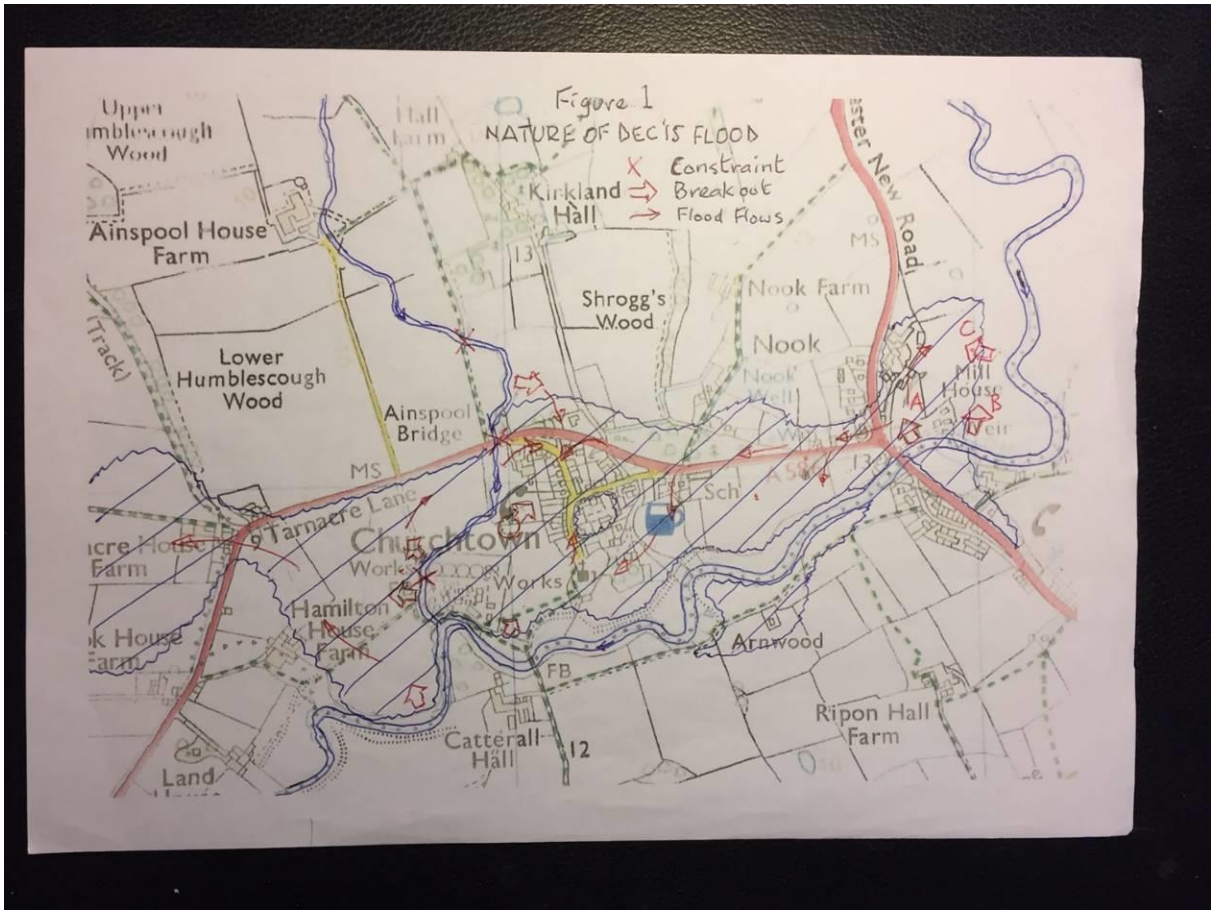
Next day the rain stopped, the power was back, the sun came out and Churchtown residents started sorted through their damaged possessions and properties. But they were angry that this had been allowed to happen, with rumours of operational failures in the raising of the flood barrier at Garstang. Within a month a village meeting was called and out of that anger, the Churchtown Flood Action Group was formed. Its objectives were to help build resilience in the village against any future flooding and to apply pressure to the authorities who have the responsibilities and budgets to prevent flooding in the first place.

The CFLAG's first job was to try to improve household resilience by encouraging residents to apply for the £500 immediate damages grant, then the £5,000 resilience measure grant. Next it set up an early warning system with two flood wardens per street so that within 60 minutes of the Head Warden receiving a Severe Flood Warning (3rd and top level of alerts), every household in the village will be advised to move cars to safer locations, to put flood protection measures in place and generally prepare for flooding. Next was the provision of sandbags and plastic sheeting in containers around the village for use by residents.

With these measures dealt with, the CFLAG turned to its role as a pressure group to find out how this latest flooding happened, and to see what could be done about it by the relevant organisations with the responsibility and budgets to make a difference. Attention was focused on the Environment Agency (EA) and Wyre Borough Council (WBC) and at that time it was believed that little more could be done at the Community level. CFLAG continued to hold its monthly meetings, whilst attending flood conferences and seminars and visiting other flooded communities. This led to the holding of the Churchtown Flood Resilience Conference in Jan 2017, attended by 140 delegates and thus building pressure on the authorities to take action to reduce flood risk to Churchtown, and indeed to reduce flood risk generally. Through this conference, new information and techniques were brought to light and new contacts were established, leading amongst other things to the idea of a flood prevention scheme for Churchtown.

2 Scheme Concept

On a walkabout survey to determine the nature of the flooding after Storm Desmond, evidence was gathered from eye witnesses about the timing of the flood reaching their properties, the direction it came from (in the dark) and the depth of water. This was confirmed by the levels of and the way debris had collected on barbed wire and other fences, gradually building up the picture of how the flood of 5 Dec 2015 had progressed. The resulting sketch plan of our findings is shown in Figure 1 below.



During this walkabout, two CFLAG members with memory of the 1980 flood, came up with a simple solution – to build a wall alongside the river in Mill House grounds to keep the water in the river and stop it breaking out at the first breakout point A shown here in Fig 1. This would require all the work to be done in Mill House property which would completely change the aspect of the house by the river and it was not clear how far upstream the wall would have to be built, nor how complicated and costly a retaining wall along the river back would be.

This was all before the 22 Aug 2016 flood which happened in daylight, when it became clear that there were multiple breakout points, next, behind Mill House at point B and eventually from much further upstream at point C.

In order to progress the basic idea, WBC offered to provide a topographic survey plan of the area above Kirkland Bridge with its ability to access the 10m x 10m grid of LIDAR levels Above Ordnance Datum (AOD) plus the positions and levels of many other relevant features such as road levels, corners of buildings and such like.

With all this information, it was possible to draw up contour lines of ground levels and the paths of the flood water breaking out from the river became clear. Equally clear was the solution to limit the flooding with an earthen bund whilst still allowing capacity for the flood water to gather until river levels receded.

The concept was

> To build a barrier with a constant crest level higher than the level where flood water crosses the A6 highway, running from the Kirkland Bridge wing wall to a point way back across the fields where the crest level meets ground level. In doing so, Mill House would still be unprotected so a loop completely round was needed. Since Mill House is on the river bank with its own road access, short retaining walls were needed with flood barrier openings for car and pedestrian access.

3 Preliminary design and cost estimates

Using the WBC topographic plan and some confirmatory levelling by our prospective Contracts Manager, we were able to establish that the level of the A6 at its lowest point of flood breakout was 12.243 AOD. Next the level of the concrete flood protection wall of the industrial complex on the opposite (or left or southern) bank was observed to be 13.0 AOD so the new right bank embankment should be no higher. The CFLAG design allows for 100mm for the eventual consolidation of the earthen embankment over the years and so the crest level was fixed at 13.1m AOD.

Next the position of the embankment had to be fixed. To provide maximum flood water short term storage, the end point was fixed at a point on the farthest field fence-line where the rising ground level was 13.1 AOD.

Then the line of the embankment across the fields was fixed taking into account the requirement of the farmer to use the space taken up by the embankment for normal farming activities. It was assumed that a 1:4 side slope would permit this and quantities were calculated on this basis.

Finally the detail around Mill House needed some form of retaining wall on the parts closest to the building, with openings for cars to enter and pedestrian access to the river bank, both with closable flood proof gates. The £5,000 flood resilience grant for Mill House was taken on board as a credit for the cost of the main flood barrier.

A preliminary Bill of Quantities was drawn up with a total of £130,000 that included real stone facing to the retaining walls. This was reduced by specifying precast reinforced concrete units for the walls, in a stone effect, but with lower labour costs for the build. With this, the preliminary estimate was set at £113,000.

In parallel with the actual design was the need to have the approval of all three land owners and their acceptance of the responsibility to maintain the structures on their respective sections of the flood defence. This was provided to the CFLAG in writing in all three cases.

With this data, the CFLAG was in a position to seek funding support from various charities.

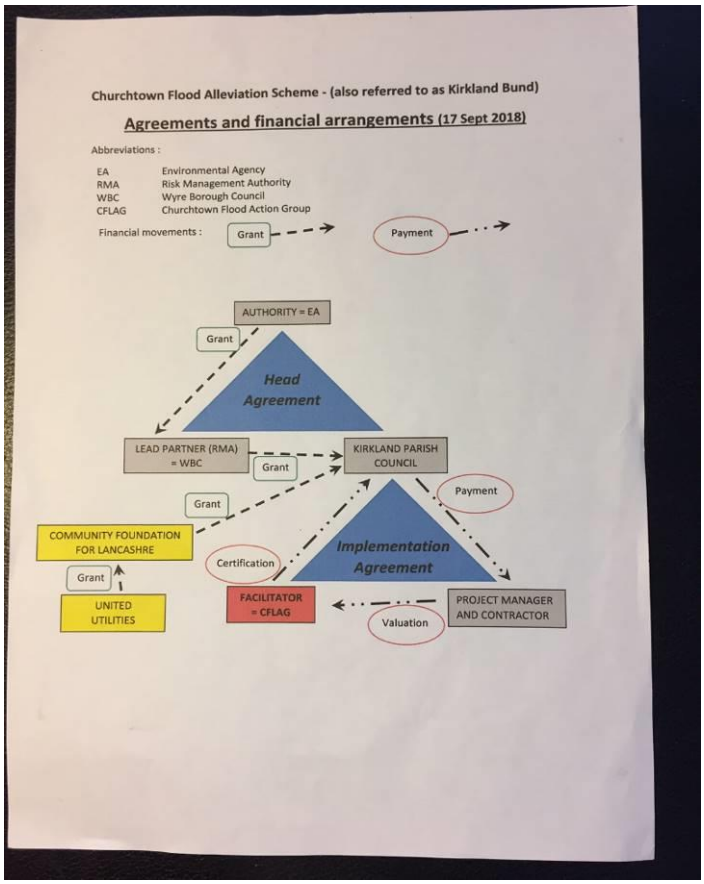
4 Contractual and financial logistics

In preparation for funding applications, the CFLAG had to work out exactly how things would run in terms of who would construct the Bund and who would sign contracts and who would pay the bills/

The CFLAG itself is a volunteer group with no bank account and no legal standing so it was stated in the various funding applications that –

- CFLAG would be the driving force behind the project and cause it to happen
- CFLAG asked the Kirkland Parish Council to act as the treasurer for the project, it being a publically accountable body. It would receive money on behalf of the CFLAG and pay invoices as approved by the CFLAG.
- CFLAG would enlist the support of a local contractor to help develop the scheme, leading to the drawing up of an Implementation Agreement between CFLAG, the Parish Council and the Contractor.
- Subcontracts for such as earthworks were to be made with the main contractor and paid through the main contractor. Invoices to the Parish Council would include VAT which could not be reclaimed and so had to be allowed for in our estimates.
- CFLAG would draw up accounts of all moneys received and paid for all its activities, with the Bund Funds demarked so that a full reconciliation could be made with the KPC accounts for the whole Bund Project to provide to each donor.

This worked fine with the funds from the Community Foundation for Lancashire (CFfL) and from United Utilities (UU) which was also administered and paid through CFfL. The EA's Gift in Aid funds came with the condition that they must be paid to a Risk Management Authority (RMA) and so WBC took on this responsibility and £69,000 was transferred to WBC to be held to make payments to the Kirkland Parish Council on request from the CFLAG. The eventual arrangement of a Head Agreement and an Implementation Agreement is shown overleaf in the diagram entitled Agreements and Financial Arrangements. An example of the CFLAG's Payment Request Form is given at Appendix C showing the two methods used to make payments.



6. Fund Raising

With an outline plan and rough cost estimate for £113,000 incl VAT worked out, it was time to apply for the funding. This exercise started in Sept 2017 by expressing the objectives of the project, its impact and outcomes, the beneficiaries and the effect on the environment. Applications were made to the following charities –

- The Prince's Trust
- The Community Foundation for Lancashire (CFfL)
- United Utilities (UU)

After two months the CFLAG was assured of £10,000 from CFfL and £20,000 from UU but in mid-December 2017 our application to the Prince's Trust was rejected on the grounds that our Project was not in line with their more land stewarding type objectives. This came as a major disappointment with still over £80,000 needed. After a series of meetings with the EA the possibility of Gift-in-Aid funding was tabled and the CFLAG supplied all the data for making the necessary Business Case or justification. A condition of Grant-in-Aid was an overall Project cost ceiling of £100,000 and so the first thing was to pare down our estimate to be within this limit. This was achieved mainly through more detailed enquiries into earthworks costs and by reducing the contingency allowance from 10% to 5% since the structure was now very straightforward with little risk of unforeseen ground conditions.

In March 2018 the assurance was finally received from the EA that funding would be available. By then the £30,000 from the first two charities was already held for the CFLAG in the Parish Council bank account, sufficient to start and substantially complete the earthworks part of the Project. But a permit was needed first.

7. Permissions and Permits

The CFLAG had already sought written undertakings from the three landowners to have the Bund constructed across their land and for them to take responsibility for the future inspection and maintenance of the parts on their land.

On Planning Permission, it transpired that since the structure was less than 2m high and not close to any boundaries, no Planning Permission was required as confirmed by WBC.

We learned from the earthwork subcontractor that they could not move without our obtaining Tipping Permits for each land owner. As we were looking at over 3000 cu m of imported material, there seemed to be a problem until the CFLAG found that the Bespoke Permit covered tipping as well as many other facets. This took over four months from the CFLAG's first application in early April 2018 to the permit being finally granted on 20 Aug 2018. Work started on site that day with the stripping and storing of topsoil ready for the earthworks.

With funds in hand to complete the earthworks, the rest of the work to build the concrete retaining walls and flood barriers could not be authorised by the CFLAG until the actual remaining funds reached the KPC account.

The Grant-in-Aid funding was linked to the Bespoke Permit in that the Grant could not be processed until the Permit was in place so that process resumed in late August but hit problems with the legal

Head Agreement needed between EA and WBC and also a legal assurance that the land owners or their successors would have maintenance responsibility for ever, for the respective sections of the Bund on their properties. These points were eventually all cleared in mid-November when WBC received funds from the EA, at which point the CFLAG could authorise the Contractor to order the wall units and complete the rest of the Project.

8 Construction

During the record period of dry weather and perfect earthwork construction conditions during June, July up to 20 August, no work could be done pending issue of the Bespoke Permit by EA. Work started with topsoil stripping and storage on 20 Aug and two days later the rain began and lasted till the end of September when the earthworks were substantially complete. At the start, 18-tonne highway dump trucks could deliver imported material directly from the entry point off the road, moving over the opened-up formation in the fields to tip the fill close to Mill House. A two-drum roller was used for the compaction of the clay core.

Then followed increasingly wet weather which was very frustrating for all concerned after the long wait over the dry summer. This now required the earthworks subcontractor to double handle the material firstly into off-highway 12-tonne tyred dump trucks with an extra excavator for loading and eventually to use 10-tonne swamp buggy wide-tracked dump trucks to transport material across the site from the roadside. The muddy conditions called for the use of a road sweeper to maintain the highway in a clean condition. What had been planned as a 4-week exercise took six difficult weeks, completing the earthworks on 28 September.

The design cross-section was for a 1m wide clay core keyed 0.5m deep below formation level in the centre of the bund or embankment, but using solid clay fill in the sections where the bund interfaced with the ends of the retaining walls.

Approved clay material was brought in first from a source near Whalley, then clay and suitable earth fill was brought in from Chorley and used as per the design detail of clay core over the section A-B on the As-built Plan at the frontispiece. The remaining fill was all clay embankment, using approved material from Chorley and Preston.

When the farmer actually saw the embankment profile with 1:4 side slopes, he requested these be made wider with slacker side slopes to better facilitate mowing and ploughing. The height of embankment at this point was quite small so the extra material was instructed but included in the fixed price contract as negotiated. The eventual slope in mid-pasture was 1:12.

A second request by the farmer was to shift the crest of the embankment from the centreline of the bund out to the edge of the field, with a 1:1.5 side slope next to the hedge. The objective was to minimise any loss of grazing area and again to ease mowing later, with no additional material needed, simply a different profile. Where the bund sweeps around the corner of the field, a limited area was levelled off for the same reason with a 1:1.5 side slope against the hedge line.

The traditional rule for achieving any substantive growth of newly sown grass before winter is mid-September, so the low bund in the large open field was the first to be top-soiled and reseeded. Fortunately, for the rest of the bund that took until the end of September to be finally shaped and top-soiled, the re-seeding also took very well owing to the warm wet weather. So before the winter, the whole bund had greened over, with a root structure protecting against erosion that would have resulted had it been left bare over the winter, thus avoiding any repeat re-seeding costs.

The order for the wall units was placed in November once Grant-in-Aid funds were available in the WBC account, ready to be drawn down against payment requests from the CFLAG. The lead time was quoted as six weeks but with winter and the year-end break, the delivery did not happen until early January. Meanwhile the Contractor was able to work through the winter and construct the reinforced concrete foundations and accurately place the bars that would tie the wall units to the foundation.

Once the concrete units were on site, the erection of the wall was quickly completed, with concrete placed around the reinforcement in the hollow units to make the toe, base and wall act as a single structure to resist any water pressure from flooding. The wall construction was finished with the placing the coping stones.

The main flood barrier is 4m wide and had been made off-site by the Contractor. This was attached to its supports built into the wall and seated on its base rail, capable of being sealed shut with a series of special clamps and a central strut. The 1.5m wide pedestrian flood barrier was a propriety product that needed accurate side and base supports building into the wall structure.

At this point, 25 Jan 2019, the contract was substantially complete with Mill House now protected against flood as well as the whole of Churchtown. CFLAG's original programme was for the whole work to be completed in 13 weeks in summer weather, but from start to finish it actually took 23 weeks with a gap after the end of September till early January when very little work could be done waiting for the GiA funding to come through and then facing the lead time needed for the wall units to be delivered.

Finally the accommodation works were done to replace fencing, hedges and gates, to build a small retaining wall around an existing manhole and to place stone for a hard standing on the UU access through the gate to their trash screens, all of which were allowed for in the contract. Some field drainage had to be instructed in two areas enclosed by the bund where surface water was slow to soak away, the cost of which was met out of the contingency allowance.

9. Costs

To date the cost of the Kirkland Bund has been £98,214.86 out of an available budget of £99,000, all as shown in CFLAG Financial Accounts as reconciled against the KPC books each year and now shown here at Appendix C. The analysis is as follows.

Bund payments made	98,214.86
Held by WBC from EA Grant-in-Aid funds, to be returned.	375.24
Held by Kirkland PC from CFfL and UU grants 1/	409.90
CFLAG Overheads for Project Management (Voluntary)	0.00
Grant funds for Bund accounted for	99,000.00

The remaining money at 1/ will be used to cover the costs of the official opening of the Bund that took place on 22 Aug 2019 and for All-Village functions to apprise Churchtown residents of the new level of protection provided by the Bund. In addition, residents will be reminded about the details of the early flood warning system set up with our volunteer Flood Wardens, complete with sandbag storage, all of which were the subject of earlier grants from CFfL.

The full details of the above figures and of all earlier CFfL grant utilisations for the Resilience Conference, Warden equipment and grit bins, are all provided in the abstract of CFLAG Financial Accounts from 2016 shown at Appendix B. All figures have been reconciled with the Kirkland Parish Council accounts and bank statements.

10 Inspection and Maintenance

From the outset all three landowners expressed their willingness to accommodate this flood protection bund and walls on their respective properties and gave the CFLAG written confirmation of their permission and responsibility for maintenance in the future.

In the final stages of the Grant-in-Aid process where WBC became the Flood Management Authority concerned with this Project, legal documents were drawn up to define the responsibilities of the land owners and their successors to inspect and maintain the structure and the role of the EA with right of access to verify this from time to time. No response was needed from each landowner unless they objected within a 21 day deadline, which none did.

The critical link in the whole scheme is the operation of the flood barriers at Mill House that require human intervention at times of flooding. Whenever the owners are absent and there is nobody at the property, they will tell the relevant Flood Warden who has been shown how to close the barriers. If for any reason this arrangement broke down, or indeed if a barrier leaked under pressure, then the ensuing flooding would be limited only to Mill House, with no risk whatsoever to the rest of Churchtown. The onus on the owner for maintaining this critical link is self sustaining.

12 Celebration of the Completion of Kirkland Bund

The third anniversary of the last major flooding of Churchtown was chosen to celebrate the completion of the new Flood Protection Scheme for the village, the result of a community effort that we are informed is the first such example in the UK. Since the bund is static there is nothing much to "open" but the Lord Lieutenant of Lancashire, Lord Shuttleworth did cut the ribbon on the gate giving access to the bund, on which plaques have been placed to mark the efforts of the CFLAG in driving this Project to its successful completion with support from CFfL, UU, the EA and WBC.

Joining the celebration were representatives from the following.

Community Foundation for Lancashire
United Utilities
Environment Agency
Wyre Borough Council including the Mayor and Deputy Mayor
Lancashire County Council
Garstang Deputy Mayor
Lancashire Police
Wyre Rivers Trust
Other Flood Action Groups
BBC, ITV and That's Lancashire TV
CFLAG members and the Head Flood Warden

In his speech Lord Shuttleworth spoke of his own experience of flooding and so could sympathise could understand the anger in Churchtown following the two recent major flood events and how the community had picked itself up and built its own flood defence – a first in the UK.

12. Continuing reliance on the 1980's Mid-Wyre Flood Prevention Scheme

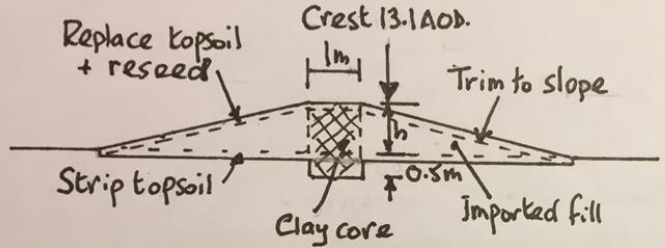
Whatever resilience is made at household level and whatever protection is put in place at village level, the success of the flood prevention scheme of the 1980's is still the overriding safeguard against the flooding of Garstang, Churchtown, Tarnacre and St Michael's. This involved the raising of flood protection embankments along the River Wyre and many tributaries with an in-line barrage at Garstang capable of holding back 1.4 million cubic metres of flood water and an off-side barrage at St Michael's capable of taking out and holding 2 million cubic metres from the main river.

That there were operational failures on both occasions at Garstang plus a breached embankment on the River Brock at St Michael's in Dec 2015, under conditions of exceptional rainfall, has brought into public focus the need to review the system. Since the recent floods, action groups have put pressure through the Wyre Flood Forum on the relevant authorities, principally the EA. Improvements are now being made to the equipment, inspection and systems.

The best possible operation of the two barrages is critical under extreme rainfall and discharge scenarios. The discharge from the River Calder has never been monitored and so was an unknown factor contributing to the choking of the River Wyre at Kirkland Bridge in Churchtown, while the operation of the Garstang barrage was based on a mark on the wall downstream of the barrage. Under pressure from the CFLAG, the EA now has a permanent telemeter at Kirkland Bridge which must now provide information that improves the effectiveness of the barrage operation. Furthermore, the public have access through the EA website to river levels in real time at key locations, including Kirkland Bridge. This is used extensively by Churchtown's Flood Wardens and residents.

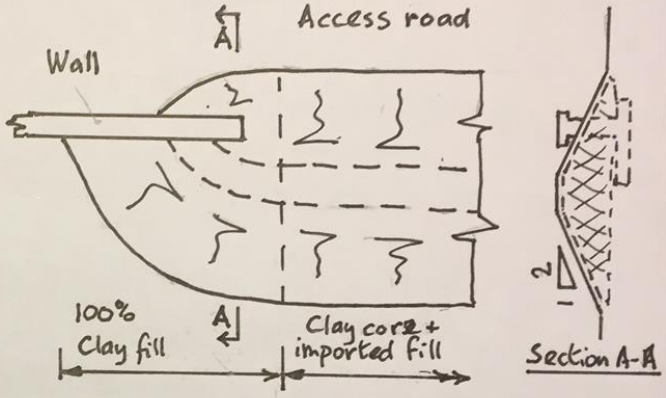
It would be interesting for the EA, and indeed the public, to have a telemeter in the Calder catchment and telemeter readings available below the Garstang Barrage and inside the St Michael's Storage area so that they would know the effectiveness of the operating system at any time. From the history generated, the programme could then be developed for the optimal performance of the whole system under the varying conditions of rainfall location and intensity and ground saturation assumptions. High tide times are a given, every 12.5 hrs, so that if the predicted additional discharge cannot be accommodated in the river channel, then the early opening of the St Michael's barrage is essential. If this decision is taken too late, then the Wyre goes out of control once the Garstang Barrage is topped, as happened on both recent major flood events. To allow as much water safely through Kirkland Bridge sooner rather than later seems key to preventing the flooding of Garstang, Churchtown and Tarnacre. The flooding of St Michael's in Dec 2015 was caused by the breach in the bank of the River Brock which was avoidable.

EARTH BUND - TYPICAL CROSS-SECTION

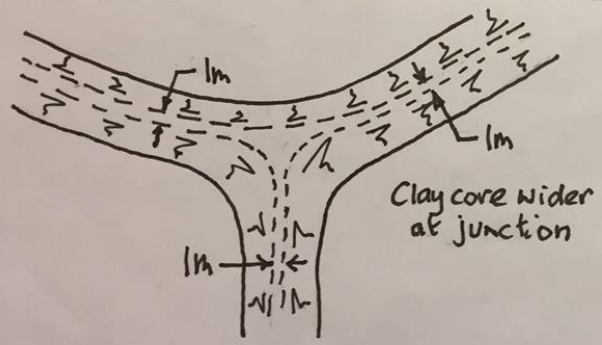


Side Slopes	
1:4	In fields h < 1m
1:3	In fields h > 1m
1:2	In garden, near walls

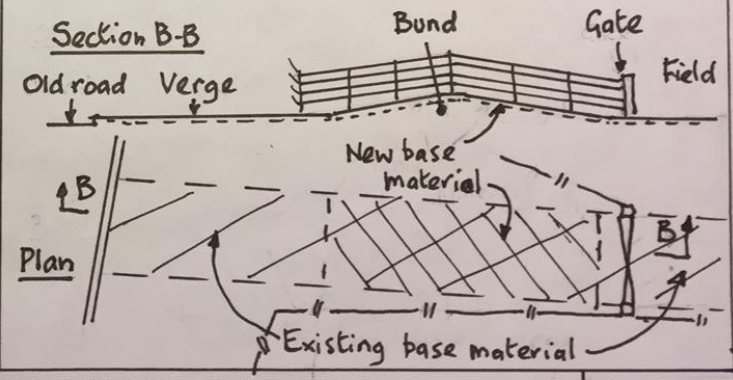
BUND - WALL TRANSITION



CORE DETAIL AT JUNCTIONS OF BUNDS



REINSTATEMENT OF FIELD ACCESS



APPENDIX A

CFLAG	CONSTRUCTION DETAILS FOR KIRKLAND BUND	4 Jun 2018

Appendix C

Payment Request No 7

Authorised CFLAG Signatories for Payment Request Form

a) Any ONE of the following four CFLAG Members listed below is authorised to verify Interim Payment Certificates or Bund Invoices from others and to sign the Payment Request Form below and submit to the Parish Council for payment.

Roger Weatherell – Chairman and a Chartered Civil Engineer
John Bracken – Member
Robert Hogg – Member
Jim Kippax – Member

b) The Payment Request Form will indicate that PC should either do (c) or (d) below :

c) Pay from funds already received from Charities and held by the PC on behalf of the CFLAG Bund Project, or

d) Invoice WBC for the amount of the requested payments from EA Grant in Aid funds held by WBC on behalf of the CFLAG Bund Project, along with all supporting documents as supplied by the CFLAG to the PC with the Payment Request.

e) WBC will send payment for the amount of the Payment Request to KPC.

f) KPC can then pay the individual amounts to the respective creditors listed in Payment Request. Payment date planned as 10 days from (a).

g) The PC accounts will then provide the complete audited account of monies from all sources used by CFLAG to build the KIrkland Bund.

Estimated Total Cost : £99,000.00

Floodsafe Contract : £92,668.97 **Contingencies : £6,331.03** **Total:** 99,000.00

#	Date & Source 1/	Floodsafe Contract				Others					KPC request to WBC	Running Grand Total
		Previous	Request	For	New total	Creditor	Previous	Request	For	New total		
1	30 Aug'18	0.00	4,368.00	Val 1	4,368.00							4,368.00
	KPC											
2	3 Oct'18	4,368.00	25,066.80	Val 2	29,434.80							29,434.80
	KPC											
3	9 Nov '18	29,434.80	6,404.52	Val 3	35,839.32							35,839.32
	WBC					Weatherell		221.00	EA Permit	221.00	8,691.92	36,060.32
						Kippax		2,066.40	Accom wks	2,066.40		38,126.72
4	25 Nov'18	35,839.32	11,330.97	Val 4	47,170.29						11,330.97	49,457.69
5	14 Jan '19	47,170.29	22,248.70	Val 5	69,418.99						22,248.70	71,706.39
	WBC											
6/	18 Feb '19	69,418.99	21,810.75	Val 6	91,229.74						***21,810.75***	93,517.14
	WBC											
7	8 Mar '19	91,229.74	***2,339.22***	Val 7	93,568.96						4,542.42	95,856.36
	WBC					Parkinson		***2,203.20***	Land drains	2,203.20		98,059.56
	Totals		93,568.96					4,490.60			68,624.76	98,059.56

1/ Paid by KPC account, either from CFLAG funds held from Charities, or from receipts from WBC from CFLAG funds held by WBC from EA Grant.

6/ Valuation No 6 represents the final account for this contract after which only the retention money remains to be paid.
According to the Implementation Agreement CFLAG/KPC/Floodsafe Ltd, two CFLAG signatories are needed to sign off this final account.

Certified and Authorised by : R Weatherell **Date : 08-Mar-19**