

The Lancashire Group

Lancashire Group Haplotype

The **Lancashire Group Haplotype** is presented as a separate document. Seven of the 13 members of the Lancashire Group have taken a Big Y test. There are BigY-500 results from the Bury and Massachusetts clan, and the Edenfield clan, and BigY-700 results from the Haslingden and Utah clan, the Haslingden clan, the New South Wales (NSW) Clan, and a descendent via a non-paternal event from an as yet undocumented family from Clayton, Yorkshire. The seventh BigY result is a BigY-500 from the Tottington clan.

The Tottington clan has SNPs A11377, and A11379, whereas the other six results share SNPs A11376, A11378, A15056, and BY58400. This indicates that the common ancestor of all seven results predates the adoption of surnames, and the Tottington clan therefore separate from the other clans of the Lancashire Group.

A SNP panel was set up at YSEQ based on private variants from an early BigY test and these have shown that A15056 is shared by all the other clans in the group (except Tottington). Other SNPs tested have remained unique to tester who uncovered them.

The STR results across the group are quite volatile with many of the divergences from the mode being confined to a single marker. Avoiding the most volatile region of DYS576, DYS570 and CDX, three markers in the first 37 markers, and three others, do divide the group, albeit inconsistently. These are DYS393 (modal 13, 3 results at 14), DYS931 (modal 11, 3 results at 10), DYS449 (modal 30, 2 results at 29), DYS710 (3 results at 36, 3 results at 37), DYS435 (modal 13, 2 results at 12), and FTY839 (2 results at 15, 2 results at 16). These values are recorded on the haplotype, but are not used to define branches.

Individual results are identified in the results on the **Warburton DNA Project** webpage by their kit number. Kit numbers beginning with H were originally **DNA Heritage** 43 marker tests, possibly extended at **Family Tree DNA**. Other results are from **Family Tree DNA**.

The following list describes the branches in the **Lancashire Group Haplotype** in more detail. It should be noted that at the time of writing FTDNA have not updated the Block Tree to reflect all possible new shared SNPs so these are shown in italics on the haplotype.

Recurrent SNPs

Comparisons of unmatched variables lists for matches between group members have identified possible recurrent SNPs. These occur when a private variant is found at a location where a SNP has previously occurred in another part of the haplotree. It is identified as recurrent because it isn't shared with close matches. These recurrent SNPs are identified in the haplotree and are considered as additional private variants.

- **Kit 3166520 (Bury and Massachusetts Clan).** This was the first BigY result and was the basis for a SNP Panel at YSEQ that included 5 SNPs based on its private variants. Four of these are still included in 6 private variants. There are 2 possible recurrent SNPs (BY28769, BY41775). The clan descends from William of Bury who married in 1802.
- **Kits 363975 and 408583 (Edenfield Clan).** This is the oldest of the Lancashire Group clans. It starts with Thomas (c1490-c1559) who is mentioned in the Tottington Manor Halmote records from 1513 (when he was already an adult) to 1559. However an earlier Thomas is listed as a tenant of the estate in 1443. It is likely that all the other clans of the group are offshoots of this one. Kit 408583 was a 12 marker STR test with 4 differences from the group's modal values. However it did test positive for SNP A15056. Kit 363975 is a BigY-500 test which produced two private variants (one named at YSEQ) and 2 possible recurrent SNPs (BY26360, ZS12414). Peter of Edenfield (1733-1814) is the common ancestor of the two participants.
- **Kit N248989 (undocumented family from Clayton, Yorkshire).** This is a BigY-700 result that has 6 private variants and 4 possible recurrent SNPs (BY228443-6) suggesting it diverged from the Edenfield clan quite early. It also has SNP (BY28891) which also appears in the Haslingden clan. This is inconsistent with other matches and is best explained if the SNP is not included in BigY-500, and is inconsistently read in BigY-700. In other words everybody has it but 4 of the 6 results did not cover it, though this has yet to be determined. The earliest ancestor is John of Clayton (1799-1879).
- **Kit IN14246 (Bury and Western Australia (WA) Clan).** This is a 37 marker STR result which is equal to the group mode for all 37 markers. It has also tested positive for SNP A15056. The clan descends from Thomas of Bury (born 1787).
- **Kit H1584 (Radcliffe Clan).** This result is an original 43 marker STR test from DNA Heritage, backed up by a positive test for SNP A15056. The clan descends from William of Radcliffe (c1734-1777) and is linked by marriage to the Haslingden clan.
- **Kit H1582 (Turton Clan).** This result is also an original 43 marker STR test from DNA Heritage, backed up by a positive test for SNP A15056. The clan descends from Peter of Turton (born circa 1809).
- **Kits 416619, 902763 (Haslingden and Utah Clan).** A 37 marker STR test was followed by a BigY-700 test. The BigY result shares two new SNPs (FT72032, BY28839) with the New South Wales and Haslingden clans, indicating these three clans are connected more recently. However it isn't known if the BigY-500 tests covered these SNPs. The result has 3 private variants and 1 possible recurrent SNP (BY24948). The testers were descended from John of Haslingden (1825-96) who emigrated to Utah. John's parents were James and Elizabeth nee Halstead but their dates and origins are unknown. The shared SNPs with the

Haslingden Clan, and the low number of private variants are consistent with a common ancestor in the 18th century. The testers were descended from sons of John's 2 wives and have a genetic distance of 4 over 37 markers.

- **Kit 911220 (New South Wales (NSW) Clan).** This is a BigY-700 result that shares 2 SNPs (FT72032, BY28839) with the Haslingden and Utah, and Haslingden clans, indicating a possible Haslingden origin. It also shares SNP RS79412106 with the Haslingden Clan. However it isn't known if the BigY-500 tests covered these SNPs. The result has 8 private variants and 4 possible recurrent SNPs (BY84031-3, BY48772). This is inconsistent with a late link with the Haslingden clan but may merely indicate unusual volatility. The clan is descended from John of Leigh (born 1768), though it focuses on the descendants of his grandson Thomas who emigrated to NSW in 1840.
- **Kits 225866, 920314 (Haslingden Clan).** A 37 marker STR test was followed by a BigY-700. The testers were father (the BigY test) and son. The BigY result shares two new SNPs (FT72032, BY28839) with the Haslingden and Utah, and NSW clans. It also shares SNP RS79412106 with the NSW Clan. However it isn't known if the BigY-500 tests covered these SNPs. The result has 2 private variants and 1 possible recurrent SNP (DC787). It also has SNP (BY28891) which it shares with the Clayton family. This is inconsistent with other matches and is best explained if the SNP is not included in BigY-500, and is inconsistently read in BigY-700. In other words everybody has it but 4 of the 6 results did not cover it, though this has yet to be determined. The clan is descended from Robert of Musbury (1825-96).
- **Kit 211606 (Tottington clan).** This clan is on a separate branch under S6881, so he is not close enough to the others to indicate a common Warburton ancestor. S6881 is dated at 604 AD with a 95% probability it falls between 120 AD and 977 AD. The village of Warburton was founded in the 10th century as a fortified Mercian (Saxon) settlement near a ford on the river Mersey. It was probably established with a handful of families, and either one or more of these founders carried the S6881 mutation, or it just possibly occurred in the village soon after. Some 3-400 years later when surnames were being adopted, many villagers would be descended from the initial carriers of the S6881 SNP. In particular the males would stay in the village, although wives might come from neighbouring villages. So it is possible that two carriers of the S6881 SNP moved away and took the village name as their own. Although they both became Warburtons their common ancestor had lived, possibly centuries earlier. Alternatively it must be recognised that the majority of modern day S6881 carriers trace their ancestry to Lancashire so it is possible a non-paternal event occurred involving one of them. The close geographical proximity of all the clans of the Lancashire Group suggests they are interrelated even if it is inevitable that some lines experienced non-paternal events.

original testers, so alternative testers need to be found.

Original STR Testing Results:

I originally compared nine STR results that are matches, but sometimes not very close, in order to calculate the Time to Most Recent Common Ancestor. (TMRCA). These results are largely superseded by the haplotree, but are retained for interest.

The situation was complicated because there are two who were tested with DNA Heritage, with the rest tested at Family Tree DNA. One test was a 12 marker test which also tested positive for SNP marker A15056, despite having 4 differences from the mode in 12 markers. It is excluded from the table below, but was from the Edenfield clan which is now represented by a kit

| Origin | Radcliffe | | | Bury/WA | | Edenfield | | Bury/MS | | Turton | | Haslingden | | Utah | | Utah | | Clayton, Yorks | | Tottington | |
|-----------------|-----------|-------|----|---------|----|-----------|----|---------|----|--------|----|------------|----|--------|----|--------|----|----------------|----|------------|----|
| | Kit | H1584 | | IN14246 | | 363975 | | 316620 | | H1582 | | 225866 | | 416619 | | 902763 | | N248989 | | 211606 | |
| GD from Mode | | | GD | | GD | | GD | | GD | | GD | | GD | | GD | | GD | | GD | | GD |
| Radcliffe | H1584 | 0 | | 1770 | 0 | 1770 | 0 | 1315 | 2 | 1490 | 2 | 1070 | 3 | 825 | 4 | 1315 | 2 | 1070 | 3 | 825 | 4 |
| Bury/WA | IN14246 | 1770 | 0 | 0 | | 1595 | 2 | 1595 | 2 | 1315 | 2 | 1280 | 4 | 1000 | 6 | 1280 | 4 | 1455 | 3 | 1000 | 6 |
| Edenfield | 363975 | 1770 | 0 | 1595 | 2 | 2 | | 1455 | 3 | 1315 | 2 | 1280 | 4 | 1000 | 6 | 1280 | 4 | 1140 | 5 | 825 | 7 |
| Bury/Mass | 316620 | 1770 | 0 | 1595 | 2 | 1455 | 3 | 2 | | 1315 | 2 | 1280 | 4 | 650 | 8 | 1140 | 5 | 1140 | 5 | 825 | 7 |
| Turton | H1582 | 1490 | 2 | 1315 | 2 | 1315 | 4 | 1315 | 4 | 2 | | 1070 | 3 | 265 | 6 | 825 | 4 | 545 | 5 | 265 | 6 |
| Haslingden | 225866 | 1070 | 3 | 1280 | 4 | 1280 | 4 | 1280 | 4 | 1070 | 3 | 4 | | 1000 | 6 | 1455 | 3 | 825 | 7 | 650 | 8 |
| Haslingden/Utah | 416619 | 825 | 4 | 1000 | 6 | 1000 | 6 | 650 | 8 | 265 | 6 | 1000 | 6 | 6 | | 1280 | 4 | 375 | 9 | 375 | 9 |
| Haslingden/Utah | 902763 | 1315 | 2 | 1280 | 4 | 1280 | 4 | 1140 | 5 | 825 | 4 | 1455 | 3 | 1280 | 4 | 4 | | 825 | 7 | 650 | 8 |
| Clayton, Yorks | N248989 | 1070 | 3 | 1455 | 3 | 1140 | 5 | 1140 | 5 | 545 | 5 | 825 | 7 | 375 | 9 | 825 | 7 | 3 | | 1140 | 5 |
| Tottington | 211606 | 825 | 4 | 1000 | 6 | 825 | 7 | 825 | 7 | 265 | 6 | 650 | 8 | 375 | 9 | 650 | 8 | 1140 | 5 | 6 | |

363975.

The Time to Most Recent Common Ancestor (TMRCA) was calculated for each pair based on the genetic distance, using the appropriate tables in the **Mutations Table** document for the average number of generations, multiplying generations by 35 years per generation, and subtracting the result from 1945. The results are shown in the table below:

Average TMRCA Based on STR Results

Notes:

1. The excluded Edenfield 12 marker test was tested for SNPs despite the 4 differences from modal values because DYS390=23, and DYS392=14 were low frequency alleles shared with the other members. The positive result for A15056 confirmed the match.
2. The quoted dates are the averages of quite wide date ranges. The experience with the Edenfield 12 marker test suggests a possible level of volatility in the results which might mean the actual TMRCA's are closer to the recent end of the ranges.
3. Hnnn kits were 43 marker tests from DNA Heritage; 32 markers common with FTDNA 37 marker tests.
4. Bury, Edenfield and Tottington are BigY tested.
5. Only the Turton clan is not documented in clan trees. Edenfield has the earliest ancestor (16th century) with the others dating from the 17th or early 18th century, except Haslingden/Utah which is not known beyond 1823.
6. The Turton, Haslingden and Haslingden/Utah tests have not been followed up with SNP tests.
7. The Tottington clan shares no SNPs below S6881 with the others, so it split before the introduction of surnames. Either two related men adopted the Warburton name independently, or there was a non-paternal event where the biological father was distantly related to the other clans.
8. Haslingden and especially Haslingden/Utah are distant from each other and all the other results, so they may also have common ancestors who lived before surnames were introduced. Both these tests are from Utah but whilst the Haslingden clan originated in Haslingden, and is well established there, nothing is known of the ancestor of the Utah clan other than he was born in Haslingden. This is interesting because the tests for the two clans are from descendants of supposed half brothers who lived in the mid-19th century, yet the TMRCA calculation puts him at 1000 AD (230 AD - 1350 AD).

Uncommon Alleles

Although these dates do not look promising the results share some uncommon alleles that suggest the match is real rather than random.

Each marker in a DNA result has a value representing the number of times a short sequence of DNA is repeated at that location. Some values will be more common than others within the population as a whole. Each possible value is known as an allele. The allele distribution is the proportion of the total results found for each allele. For example marker DYD464d has a value of 17 in 49% of people in Haplogroup R-U106.

The chances of randomly sharing several uncommon alleles can be very low. The Lancashire group all share 3 allele values which are less common. These are DYS447 value 24 which has a 31% probability, DYS464d value 19 which has a 4% probability, and DYS442 value 13 which has a 15% probability. When I first explored this there was a fourth uncommon allele, the value 23 at DYS390. However within U106 the frequency of this allele has been found to be 59%. Multiplying just these 4 values gives a probability of any two people at random having all four values of about 0.01%. This gives added confidence that the Lancashire group share a common ancestor.

The **Mutation Table** includes allele frequencies within the R1b-U106 haplogroup for a number of markers.